TABLE E1. Details of UVa patient screening

UVa cases	No. of patients	No. of sera positive for IgE antibodies to α-gal >1.0 IU/mL	No. of sera positive for IgE antibodies to α-gal <1.0 IU/mL*
CIU cohort	28	0	3
CIU cohort controls	25	0	0
Angioedema	17	3	5
Anaphylaxis	19	6	1
Urticaria	51	6	5
Asthma	27	0	3
Atopic dermatitis	10	0	2
Chronic sinusitis	11	0	1
Allergic rhinitis	14	0	1
Other†	41	0	0
Total	243	15	21

UVa, University of Virginia; *CIU*, chronic idiopathic urticaria.

*These 21 sera positive for IgE antibodies to α-gal all have titers of less than 1.0 IU/mL, and these patients were not enrolled in the study and were not counted among the 24 cases.

†"Other" includes nonallergic, oral allergy syndrome, eosinophilic esophagitis, allergic bronchopulmonary aspergillosis/mycosis, rash, and hypogammaglobulinemia.

TABLE E2. Inhibition RIA for α-gal and Bradford protein assay of extracts

	Dilution for 30% inhibition	Percentage inhibition at highest concentration	Protein concentration (mg/mL)
Beef			
Fresh	0.15*	78*	684
Commercial	0.51	54	693
Pork			
Fresh	0.27*	63*	884
Commercial	0.37	54	632
Lamb			
Fresh	0.3	59	563
Commercial	0.38	55	553
Chicken			
Fresh	NA	18†	775
Commercial	NA	27†	605

Inhibition RIA for α-gal in fresh extracts of beef, pork, lamb, and chicken compared with commercial reagents. Values are expressed as the dilution of the respective extract to achieve 30% inhibition and the percentage of inhibition at the highest concentration of extract. The results represent the mean of 3 experiments performed in duplicate. A lower value is consistent with an increased presence of α-gal. Briefly, galactose-α-1,3-galactose-β-1,4-GlcNAc*BSA was radiolabeled with iodine 125 by using the chloramine T technique. Serum negative for IgE antibodies to α-gal with a high titer of IgG antibody was incubated for 3 hours with serial dilutions of pork thyroglobulin to construct a standard curve or serial dilutions of meat extracts. Radiolabeled α-gal was then added to these dilutions and incubated for 3 hours. Goat anti-human IgG was then added for overnight precipitation. The following morning, samples were washed 3 times, and the amount of radiolabeled α-gal in the precipitate was quantitated.

NA, Dose for 30% inhibition is beyond the limit of detection for this assay.

Protein concentration was compared by using the Bradford method according to the manufacturer's specifications.

*$P < .01$ for fresh extract compared with commercial reagent.

†$P < .01$ for the concentration of α-gal in mammalian meat extracts compared with chicken.